



10 years of NCRM

making methods matter

NCRM
National Centre for
Research Methods

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“Our ability to deliver high quality and robust evidence for policy-makers depends fundamentally on the soundness of the underpinning research design and analytical methodology.”

Professor Paul Boyle
Chief Executive, ESRC

Foreword

The vital role of the social sciences in addressing the most pressing global societal challenges is increasingly evident. Yet, our ability to deliver high quality and robust evidence for policy-makers depends fundamentally on the soundness of the underpinning research design and analytical methodology. Since 2004, the NCRM has been central to delivering the ESRC's strategy for taking forward methodological development, innovation, and capacity building.

The ESRC established the NCRM in response to long-held concerns that, despite clear pockets of methodological excellence, the UK lacked the strategic focus and critical mass to sustain its position at the international leading edge. There was a pressing need to integrate methodological innovation with the ESRC's broader objective of enhancing the capacity of the UK social science community to deliver high quality research with impact.

The NCRM was tasked with providing a strategic focal point for the identification, development and delivery of an integrated national research and training programme to improve the quality and range of methodological skills and techniques used by the UK social science community.

This booklet is testament to the NCRM's successes in meeting these ambitious objectives. With its strategy of undertaking methodological development in a substantive policy context, the Centre has achieved a direct influence in key policy areas, such as its work on school league tables and influencing policy on retention periods for genetic material from juvenile offenders. It has contributed to effective practice by improving surgical training and developing software packages used by business and local authorities. Much of the impact of the Centre's work comes through the enhanced ability of the people it trains to undertake high quality research themselves.

The NCRM has made substantial contributions to national capacity building in research methods, with approximately 1500 social scientists participating in its training events and courses each year. While the majority of participants come from the academic sector, hundreds of social scientists from civil society, the public and business sectors also take part. The Research Methods Festival has rapidly evolved under the NCRM's stewardship into one of the largest and most significant meetings of social science methodologists in the world.

After a positive evaluation of the NCRM's work in 2012, the ESRC undertook to continue with a further five years of funding from October 2014. We are pleased to announce that the new Centre will comprise a collaborative partnership between the Universities of Southampton, Manchester, and Edinburgh. This new structure promises to deliver continuity for existing activities, while broadening the Centre's remit into new and exciting areas.

The ESRC is delighted to be funding the NCRM for a further five years, allowing the Centre to build on its work over the last 10 years to improve the standard of research methods across the UK social science community. There are on-going challenges that require its attention, both in terms of capacity building and further innovative research, given the rapidly developing data landscape and the new opportunities it offers for those with the suitable tools and techniques. We are confident that it will rise to the challenge.



“Operating as a network with a shared vision, the Hub and Nodes have used their critical mass to ensure that the UK continues to produce world class research at the frontiers of development in key methodological and policy area.”

Professor Patrick Sturgis
Director, NCRM

From our Director

The ESRC established the National Centre for Research Methods (NCRM) at Southampton in 2004 to consolidate the initial work of the Research Methods Programme at Manchester in addressing long-recognised problems of methodological under-capacity in the UK social science research community.

The new Centre was tasked with increasing the quality and range of methodological approaches used by UK social scientists through a programme of training and capacity building, and with driving forward methodological development and innovation through its own research programme.

Since its foundation, NCRM's 'Hub' at the University of Southampton has been responsible for carrying out a wide range of coordinating and strategic functions, operating as a focal point for national research and training activities in research methods. The Hub has worked alongside three phases of 'Nodes', each lasting three years, with the aim of developing and promoting methodological innovations in quantitative, qualitative and mixed methods, and building capacity in their application across the social sciences.

The NCRM Nodes have comprised research groups from fifteen different UK universities, with established records of excellence in methodological research. Operating as a network with a shared vision, the Hub and Nodes have used their critical mass to ensure that the UK continues to produce world class research at the frontiers of development in key methodological and policy areas. This has led to research and training synergies within the Centre and has also enabled NCRM to broaden and strengthen its outward engagement with the social science research community.

NCRM has also undertaken a range of activities aimed at building methodological capacity within the UK social science research community, across all sectors and disciplines. One of its most widely used resources has been the online training and events database, which enables users to find and reserve places on the many training courses run by NCRM as well as by other training providers in the UK. Another important feature of the website is the NCRM ePrints repository which provides a single access point to all of the Centre's outputs, including presentations, videos, podcasts, working papers, journal articles, and reports.

NCRM has funded and coordinated an annual programme of Networks of Methodological Innovation, which have served to bring national and international experts together in particular fields and have widened awareness of new developments. The Centre has also commissioned shorter duration Methodological Innovation Projects focusing on methodological development in strategically important areas such as social media analysis, data linkage, qualitative longitudinal methods, and survey nonresponse. It has run an annual Autumn School providing a forum for early career researchers with methodological interests, which highlights points of connection between different fields of methodological research and promotes career development.

The biennial Research Methods Festival is NCRM's flagship event. In addition to serving as a forum for interaction and networking between researchers from different methodological traditions, it also provides an important opportunity for researchers from across the social sciences to broaden their methodological horizons, to encounter different disciplinary approaches, and to find out about the many exciting developments taking place within the UK and internationally.

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One of the many beauties of social science is that it is truly multidisciplinary, not only substantively but methodologically – and those methods have been moving forwards over the past ten years at a great velocity. As the questions social science addresses get ever more complex and ever more important it has been critical to have NCRM to coordinate new developments across a wide range of epistemologies and to ensure high class communication of both new and established methods. And the Festival has been just brilliant! Congratulations to all those who have been involved with NCRM over its first ten years and let us look forward to many more years of NCRM at the forefront of methodological developments in our wonderful disciplines.

Professor Ian Diamond, Vice Chancellor, Aberdeen University

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Understanding the Pathways to a better life

The need to better understand the links between our social and economic circumstances and our health was a key driver behind the establishing of the NCRM Pathways node, based at the London School of Hygiene and Tropical Medicine, and the London School of Economics. Researchers there have been developing and sharing new methods to study those links using biomarkers and genetic data and in particular to look at the effects of having children and partnerships on later life health.

Data on biological indicators or biomarkers are less susceptible than other health measures to subjective reporting factors. Compared with morbidity, disability or mortality, they allow researchers to identify differences in health-relevant outcomes at an earlier stage of the lifecourse. They can also make clearer how and why later life advantage or disadvantage is affected by life events and circumstances.

The collection and analysis of this type of data makes it possible to look at things like how having children influences a woman's health in later life or the impact on a person's health in mid-life of a change in partnership status.

Using data from the English Longitudinal Study of Ageing, researchers Emily Grundy and Bianca DeStavola derived a measure of allostatic load (a composite measure based on biomarkers conceptualised as an indicator of accumulated stress).

They looked at the links between this measure and a woman's fertility history and any long-term illness measured at a later time, taking account of reported health in childhood and other measures such as education.

They went on to investigate the extent to which those links were affected by wealth, health related behaviours and social support and strain. They found that women who had biological children at a young age had a higher (worse) allostatic load and were more likely to be affected by long-term illness later in life. Some, but not all, of this association was accounted for by the pathways linking early parenthood to poorer health behaviours and less wealth.

Overall the findings show that in the population studied, early parenthood, associated with larger eventual family size, seems most important in terms of later health, and also that measures based on biomarkers, such as allostatic load, are useful predictors of later health problems.

In another piece of research, using data from the British National Child Development Study (NCDS - the 1958 birth cohort study), researchers George Ploubidis and Richard Silverwood looked at how partnership histories were related to biomarkers collected in 2002-04. The results showed that there was a link between partnership histories, including when someone got married, and biomarkers measured in mid-life, with those who married relatively late and remained married having the best indicators, especially men.

Investigations of observational data such as these may be affected by biases, such as not accounting for important influences of both the risk factors being investigated and the health outcome. These and related issues are the topic of Pathways training courses in causal inference, led by Bianca DeStavola, where current methodological developments in the field have been made accessible to applied social science researchers.

Food and families in hard times

There is often a difference between what we do and what we say we do. That is certainly true for many of us when it comes to eating. With the ongoing debates in society about obesity, it is key that researchers can get to the facts of the matter. NCRM's Narratives of Varied Everyday Lives and Linked Approaches (NOVELLA) node, based at the Institute of Education, University of London, and has been looking at food and families in hard times as part of its wider efforts to develop methodological innovations for studying our everyday habits.

Talking openly about what, when and how we eat is often tied up with emotions like shame and guilt. When answering diet-related survey questions for example, people may say what they think is normal, rather than what is strictly true. Cooking dinner might not be the most exciting thing we did in a week, so recalling the details might prove a challenge. These things can be difficult for a researcher seeking to get to the facts of the matter.

NOVELLA's Food and Families in Hard Times project is looking to see how useful narrative archival sources might be in this type of research. Using the Mass Observation Archive, Ambleside Oral Histories, Waltham Forest Oral Histories, together with resources at the Imperial War Museum and British Library, they have gone back in time to examine a range of food and family related information, including oral histories from the First World War and photographs and cookery books from post war Britain as well as diaries recounting people's personal accounts of their lives.

By capturing people's eating stories and how these are embedded in the experiences, relationships and routines of their everyday lives, the research team of Professor Julia Brannen, Dr Rebecca O'Connell and Dr Abigail Knight from the Thomas Coram Research Unit at the Institute of Education found that during particularly difficult times, for example when there are food shortages and prices are high, everyday food practices are consciously reflected upon. They also found that childhood memories include vivid recollections of food at particular events and occasions in the social calendar.

By looking at those stories in conjunction with a range of retrospective sources, the researchers have addressed some of the methodological challenges of re-using narrative data, including the considerations around time and space of interpreting memories of food and family life, the importance of linking varying data sources and the need to place data from different historical periods in context.

'I thought it was the single most helpful day for AOHG in 37 years...I felt the group was drifting about in cyberspace before, just churning out interviews and transcripts, but suddenly we've located a mothership who knows who we are!'

Jane Renouf, Ambleside Oral History Group

The project has led to a range of close working partnerships with professionals and organisations outside of academia and a number of events giving social scientists, curators and archivists from many sectors a fuller view of the opportunities for using oral history data from community archives.

Food researchers, journalists and archivists, including from business, interested in food practices gained insights into the usefulness of this type of research for understanding food practices. Meetings and interviews with local oral history archivists also helped them to expand the repertoire of their work with the archives.

Learning about multilevel modelling online

As part of its training and capacity building programme, the Learning Environment for Multilevel Methodology and Applications (LEMMA) node, based at the University of Bristol, has developed an online course in multilevel modelling. Launched in April 2008, the course now has getting on for 13,000 registered users, of which nearly 2,000 are non-academics. So what is behind this online training success story?

The course is aimed primarily at social science and public health researchers, at all career stages, and from both academic and non-academic sectors. With this audience in mind, the materials draw upon a broad range of examples from across the social and health sciences, including education in Scotland, voting intentions in the US, and uptake of antenatal care in Bangladesh.

An important aim of the course is that it should cater for learners with varying knowledge and experience of quantitative methods. It was therefore designed so that learners could enter at different points according to their current level of knowledge.

A prerequisites quiz is available to guide learners towards a suitable starting point. Those who need a statistics refresher can begin with the first module, which introduces quantitative research, while those who have taken an introductory course might start with regression analysis for (single-level) continuous and binary responses.

The aim is to provide a 'ladder' for learners to progress to the part of the course that covers the methods most appropriate for their research question and data. Consistent terminology and notation, and cross-referencing with earlier modules, are used to help ease the progression to advanced multilevel modelling.

There are currently 15 modules, including traditional regression analysis, two-level models for hierarchical data structures with continuous or categorical outcomes, three-level models, models for non-hierarchical structures, and methods for handling missing data in multilevel structures.

Each module is split into a series of lessons with integrated 'concepts' and 'practical' sections. The concepts component gives a detailed description of a statistical model, including the types of data and research questions it can be used to investigate and its interpretation, but without reference to any statistical software package.

The practical component then provides instructions on how to conduct analyses in statistical software and interpret the results. The first release of the course included practicals for the MLwiN software, which was developed by the Centre for Multilevel Modelling at the University of Bristol and which is free to UK academics under LEMMA, but these have since been extended to Stata, R and (coming soon) SPSS. Online resources have significant benefits. Attending face-to-face courses can be costly, both financially and in terms of time. Being online and free is likely to explain the popularity of the LEMMA course among students and researchers from across the UK and overseas. Learners can also access the materials at a time and pace that suits them, which could be especially attractive to non-academic researchers who find it difficult to dedicate several days to attend a course.

Nevertheless, the online format provides limited opportunities to ask questions or to discuss research with experts in the field. Many LEMMA users therefore start with the online course and then go on to attend face-to-face training.



Can school league tables really help parents choose schools?

For many years now the UK Department for Education (DfE) has collected repeated test score data and pupil characteristics for schools in England. But just how useful is the information? Researchers from NCRM's LEMMA Node investigated.

The data provided by the DfE form the basis for school rankings available to the public largely through the media, which routinely publish school league tables in terms of average test and exam scores.

Successive governments have encouraged parents to use these rankings to choose schools for their children, especially secondary schools. The LEMMA node research explored the extent to which these numerical summaries can really supply useful information and concluded: very little.

Researchers and the Government itself generally agree that so called 'Value Added' (VA) or progress measures of school effects, essentially average test scores adjusted for differences in schools' intake, are appropriate tools for making comparisons among schools.

There is also general agreement on the need to provide 'uncertainty intervals' around these effects so that they are not viewed with spurious accuracy. For example, few would wish to make a comparison between two schools based on data from just one pupil from each school!

It turns out, in fact, that even when whole school years are involved in providing these 'Value Added' estimates, the margins of error are very large and most schools cannot sensibly be separated with any precision. Unfortunately such caveats are typically omitted from media reports.

Using the Government's National Pupil Database (NPD), the LEMMA research has shown that the use of these estimates, based on the most recent GCSE results, are rather poor predictors of results for the same schools seven years later, when the cohort of pupils confronting a choice of secondary school will themselves sit their GCSE exams.

Adding to this the uncertainty intervals, the research found that very little distinction can be made between schools in terms of their Value Added performance. It also revealed how it is possible to produce simple graphs showing, for each school that a parent might be considering, what the odds are that it will have a VA score greater than any of the other schools.

Typically such odds are less than even, underscoring the fact that this kind of information has very little usefulness for the purposes of choice.

The researchers, Harvey Goldstein and George Leckie, from the University of Bristol suggest that a very straightforward 'app' could easily be constructed, for use on the DfE web site for example, that would allow a parent or member of the public, or journalist, to calculate and display such odds, so placing league tables into their proper context.

Further reading

Goldstein, H. and Leckie, G. 2008. School league tables: what can they really tell us? *Significance*, June 2008, 67-69.

Leckie, G. and Goldstein, H. 2011. Understanding uncertainty in school league tables. *Fiscal studies*, 32, 207-224.



Finding the flaws

Impacting on science and policy

The extensive storing of DNA samples for the national crime database has long been a source of controversy. After flawed statistical evidence appeared in a Home Office consultation document, a review of Government policy on retention of DNA samples was carried out by NCRM's Lancaster-Warwick-Stirling node. Its findings, heavily influenced by earlier work on the retention of criminal convictions, has had major scientific and policy impact.

In November 2007, the Information Commissioner's Office (ICO) ordered four police forces to delete four old criminal convictions from the Police National Computer (PNC). The people involved had been convicted of a single minor offence before the age of 20 and were now over 40 with no further convictions. The ICO was concerned that this information was being held contrary to the principles of the Data Protection Act, that it was no longer relevant and was excessive for policing purposes.

That decision was appealed by five police forces at an Information Tribunal the following April. But the Tribunal, which heard expert testimony from node researchers Brian Francis and Keith Soothill, supported the view that the early police records had no predictive value for later offending. The police were told to provide a new policy on data retention, a ruling, however, that, a year later, was overturned.

This high profile case and concerns raised over flawed statistical evidence presented in the Home Office report, *Keeping the Right People on the DNA Database: Science and Public Protection*, prompted a review of

the retention of police records and the appointment of an independent advisor on criminality information management.

Professors Francis and Soothill at Lancaster University were invited to present their methods and findings on the question of when past convictions become of little or no value in the prediction of future criminality.

The team showed how it made use of data from the Home Office's Offenders Index across two birth cohorts - 1953 and 1958. They compared the risk of reoffending of a young person convicted of a non-violent crime before the age of 21, with that of someone born in the same year who had never committed an offence. By the age of 35, the risk of reconviction for those who had committed an offence was nearly the same as the risk of a first conviction for the those who had never offended. This provided evidence that the retention of criminal convictions long in the past was of no operational value for future offending.

The same methodology, published in the *Howard Journal*, formed the basis for further work on DNA, where the retention period had been determined (12 years for serious offenders whether or not they had been found guilty). The methodological problem was similar – when an arrestee with no subsequent arrests has a risk of re-arrest similar to someone who has never been arrested.

The findings were presented to the Home Office and led to a new policy report, *DNA Retention Policy: Re-Arrest Hazard Rate Analysis*, and a major revision of the scientific work on DNA retention. The review concluded that a proposed six-year DNA retention period for people arrested for crime was built on flawed statistical evidence. The period was calculated from the 'first official process', instead of the most recent arrest where DNA retention would be restarted. In addition, rapid re-offending by persistent criminals was not taken into account. This has now led to a revised policy which has been implemented in the new *Protection of Freedoms Act 2010-12*, which contains a reduced five year retention period for DNA profiles for those arrested but not found guilty.

1 Leading the way on Big Data

0 Big Data is becoming a central part of government policy for science, having been identified as one of eight great technologies for economic growth.

The Geospatial Data Analytics node TALISMAN, based at the University of Leeds and University College London, is leading the way in the development of new research methods for the analysis of Big Data, and in promoting the discussion and adoption of Big Data in both academic research and policy-making.

Big Data have been described as those which are high in volume, variety and velocity. A good example is the Research Opinion Poll in which more than one million respondents every year answer questions varying from newspaper readership to their favourite supermarket.

Talisman research has focused particularly on local migration patterns and profiles for individual households. The work is adding significant new evidence to debates about the social and economic factors around people's desires to move to the edges of urban areas or to the countryside. It has also been exploring how those moves are linked to our aspirations for leisure, lifestyle and consumption.

In a project studying local crime patterns, land use data were integrated with open source maps and street patterns (to gauge accessibility), local area demographics (to demonstrate 'guardianship'), along with incident counts provided by a policy partner (Safer Leeds).

The work has shown that crime rates are crucially dependent not just on personal characteristics and neighbourhood type, but on the neighbours of your neighbours – a complex hierarchy of household attributes, place types and neighbourhood configurations.

An example of high velocity information is Twitter, which has provided valuable intelligence about location, movement and purpose of individual traces around a city. It has been possible to show empirically that the activity spaces of inner city residents are more concentrated than their suburban counterparts, but neither more nor less diverse in their activity mix. These data have also been used to study violent crime. Preliminary results suggest that the residential population density (traditionally used to quantify crime hotspots) is inappropriate for crimes that involve mobile victims.

Government and business organisations are capturing ever more extensive data about their customers, services and partners. TALISMAN has worked with a number of external organisations through its User Fellowship programme to provide in depth case studies of the value of spatial analysis to public service organisations.

These include the Greater London Authority (GLA), Leeds Citizens Advice Bureau, and commercial organisations such as TraceMedia and GeoFutures.

Methods have been developed for data capture and analysis including a Big Data Toolkit for geospatial data applications. The research has been showcased at a variety of exhibitions, including Leeds Museum, the Excel Centre in London (Grand Designs Live), The London Building Centre and The Barbican. TALISMAN has also reached out through various media outlets, including The One Show (BBC One).

The importance of Big Data is reflected in significant ESRC investment in a Big Data Network, which includes a Consumer Data Research Centre (CDRC) to be shared between Leeds, UCL, Liverpool and Oxford. The CDRC will capitalise on these early developments by creating data sharing partnerships with retail and service businesses. It will also enable access to this type of data across the entire academic community in order to stimulate new questions in a rapidly changing information environment.

Tools for touch

From iPads in schools to the instruments used by surgeons in our hospitals, digital technologies are leading to an intense new interest among social scientists in touch. Until recently, touch had escaped the attention of mainstream research, but the NCRM's MODE node, based at the Institute of Education, University of London, is changing all that.

In recording, documenting and analysing, mainstream research into social (inter-) action, until recently, had focused on spoken and, to some extent, visual means of communication. Touch didn't really feature.

Nowadays, the ubiquitous use of touch-interfaces, and technologies such as new kinds of surgical instruments, are reconfiguring who, what and how people touch and the central role of touch in our engagement with the world, in making meaning and in communication, is becoming evident.

With the growing recognition of touch in social science research, there is a pressing need for theoretical and methodological tools to account for touch. Drawing on a series of research projects, MODE has begun to address this need. It has been exploring touch from a range of theoretical perspectives including social semiotics, phenomenology, neuroscience and human-computer interaction. It has been using different methodological approaches such as ethnography, grounded theory and a range of methods including observations and interviews.

MODE's research takes place across a range of social settings, occasions and groups, including early years students' finger painting on paper and iPads; different age groups in special schools using iPads in literacy lessons; and surgeons and their trainees using special instruments as they perform key hole surgery.

The questions being asked are far-reaching. In one project, researchers investigated the range and distinct meaning-potentials of touch in an effort to find establish the relations between touch and resources such as gesture, gaze and speech, drawn on in interaction with other people.

A second project looked at how certain technologies, such as the iPad, or laparoscopic surgical instruments (standing-in for many others), mediate what and how people touch.

Another piece of research looked at how touch operates as a resource for making meaning, that is, the question: how touch is used to interact with others, and how it is interpreted by others.

Fourth and by no means last, the research team looked into the role of touch in learning.

Cutting across all the projects is the attempt to develop apt ways of documenting touch.

Together the research shows the fundamental significance of touch in the everyday lives of people and its implications for learning and communication across different contexts. It illustrates the different ways in which touch can be theorised and investigated empirically, using both qualitative and quantitative approaches.

A series of papers has helped to sketch out important directions for future research in 'multimodality'. The work shows how the reach of multimodality can and needs to be extended by integrating touch (alongside other under-researched resources, such as smell, taste, texture) in future accounts of social (inter-)action and meaning making.

Such accounts are urgently needed by researchers as much as by those designing and using technologies, in contexts of learning and beyond.



Facets of friendship

Friendships are important to most of us, but they can also be difficult and draining. A new approach called Facet Methodology is helping social scientists to understand the ups and downs of friendship.

Researchers at the Realities Node (Morgan Centre, University of Manchester) developed a new approach called Facet Methodology in a project that is helping to transform how friendship and kinship are theorised and understood in contemporary society. A team of researchers collaborated to create an inventive yet methodologically rigorous approach to explore facets of everyday life, and to create perspectives and insights that question our taken-for-granted views of the world.

Dubbed Facet Methodology, the 'qualitatively-driven' approach uses the metaphor of a gemstone to imagine the research problem as a set of facets, each of which is investigated through inventive combinations of methods and questions. The goal is to create insights that transform understandings about everyday lives.

The team used the approach in their 'Critical Associations' project to explore how non-family relationships matter to people. The different facets they designed included:

- A Mass Observation directive where people were invited to write about the ups and downs of their friendships
- Era memory workshops on critical associations in people's personal eras
- Archival and ethnographic explorations of neighbourhood change
- A mini-ethnography of Facebook use
- Music and film elicitation of 'clubbing days'

The approach enabled the team to challenge the assumption, made not only in everyday life but also in social theory and policy, that friendship is always a moral 'good'. It shed a different light on the term 'friend', which inherently implies something positive and valued, by showing that friendship can also be difficult, draining, and a matter of duty as much as choice.

The research also questioned the strongly held assumption that what defines friendship differently from kinship is that it is based on choice and mutuality, rather than a sense of duty and permanence as kinship is thought to be ('you can choose your friends but not your family'). Instead, the findings showed that although friendship can be enduring in a good way, it can also be 'sticky' and hard to escape. It isn't the case that people can easily drop a friend if the relationship becomes one sided or draining, and people often feel a sense of duty and obligation to friends just as they might to their family.

Findings from the project, as well as this innovative methodological approach, have received intense interest from academics and journals, the media and the wider public. As well as a range of high profile publications, the researchers have been invited to give keynote addresses in the UK and around the world. Facet Methodology is increasingly featuring in research projects and funding bids and in training for researchers in academia and the voluntary sector.

To find out more about Facet Methodology, please go to <http://bit.ly/1lyxYaa>

"NCRM, in all 3 phases, has helped to create spaces for genuinely interdisciplinary and exciting dialogue about qualitative ways of knowing the social world, inspiring research imaginations as well as creative and inventive approaches. This kind of epistemological engagement is vital, because it keeps the craft of knowledge, rather than simply the technicist advancement or elaboration of technique, at the heart of the methodological endeavour."

Professor Jennifer Mason, University of Manchester



Asking the taxing questions

Robust evaluation of Government policy initiatives and changes is by no means a straightforward business. The NCRM node, Programme Analysis for Policy Evaluation (PEPA) at the Institute for Fiscal Studies, is stimulating a step change in the way programme evaluation is conducted, whilst some new research by the node is helping to shed light on the design and impact of welfare reforms on lone mothers.

Answering difficult questions about the effectiveness of state interventions - such as 'Did this training programme help the participants get back to work?', or 'Did this child health programme improve children's outcomes?' - is the goal of programme evaluation.

Doing that robustly and credibly, however, presents major challenges for researchers and policy makers alike. Enter PEPA, which is based at the Institute for Fiscal Studies (IFS) and the Centre for Microdata Methods and Practice (cemmap), University College London, which has been working to improve the way programme evaluation is carried out. It also aims to maximise the value of programme evaluations by improving their design and how they add to what we know.

In a recent project, aimed at better understanding the long-term effects of welfare reforms and informing policy in this area, a team at PEPA investigated the closely intertwined lifelong processes of employment decisions, experience accumulation and earnings among women.

Understanding the working decisions and wage progression of women is crucial for both policy design and analysis and women, especially lone mothers, are repeatedly at the centre of policy debates for being especially vulnerable to poverty.

For mothers of young children, poverty is often associated with taking time off work for childcare. This can have lifelong consequences on their career prospects, their earnings capacity and the wellbeing of their children. However, compared to men, women have been found to respond more to welfare policies promoting work.

Previous research shows that 'make-work-pay' policies like Working Tax Credits increases significantly the employment rates of mothers and supports optimism about the potential benefits of carefully designed welfare-to-work interventions.

The PEPA team found that working experience and fulltime employment is particularly important for women with more than basic education. For them, taking time off work or working part-time carries a wage penalty that will affect employment and earnings in the long-term.

On the contrary, the researchers find that working experience does not seem to be important for the career prospects or earnings of women who leave school at the age of 16, with no qualifications. Their earnings profile is nearly flat over the course of life, independently of their past experience.

The research team say their conclusions not only bring credibility to past research on the short term impacts of tax credit reforms on women with no qualifications, but also explain why it is difficult to change the employment decisions of these women in the longer run if they are moved off benefits.

The research is currently being revised for a top economics journal and is likely to attract considerable wider interest as we head towards a general election in which benefits and welfare reform will be right at the top of the political agenda.



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NCRM built on a number of ESRC initiatives, notably the Research Methods Programme, when it was first established. It has stimulated developments in research methods across the social sciences and has provided a coordinated framework for ESRC investment and for communications around the research community through events, resources, information and research collaboration.

Professor Chris Skinner
Professor of Statistics, LSE

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Research methods training and capacity building

Over the past 10 years, NCRM has fostered a synergy between social science research and the building of capacity in advanced research methods. In each of the three successive phases of NCRM node funding, it was stipulated that thirty per cent of the planned work be devoted to capacity building.

NCRM's strategic framework for capacity building recognises that traditional face-to-face training plays a central role in building research capacity, while acknowledging the importance of supporting activities such as peer discussion and exchange, and the use of online learning or other resources to develop research skills.

The Centre has sought to build capacity in research methods by offering training in new advanced methodologies that is closely linked with ongoing research activity. The training not only benefits the trainee, but also allows the researchers providing it and developing the new advanced methodologies to engage with a range of individuals seeking to apply the new methods in a variety of settings. This helps to raise awareness of research scenarios that may need addressing if the new methods are to gain broad acceptance. Essential extensions, revisions and refinements may therefore result from the engagement that training brings.

One, two and three-day face-to-face training courses are the mainstay of NCRM's provision, although longer courses and events have been delivered in the past, utilising a variety of workshop and Masterclass formats. NCRM has also gathered supporting resources that are available on its website. These include the ReStore repository of online research methods resources, which preserves and actively maintains web resources funded by the ESRC and focused on research methods in the social sciences.

Delivering high quality training

NCRM's training and events database is now established as a national resource, with more than three and a half thousand records of advanced training events from more than one hundred providers, including the 21 ESRC doctoral training centres. The database has been integrated with other ESRC funded initiatives' websites, such as the Quantitative Methods Initiative and the Researcher Development Initiative.

A process where individuals, groups, networks, organisations and the wider social science community are encouraged and facilitated in enhancing their knowledge and skills so as to increase their ability to perform innovative social science research.

NCRM definition of capacity building

NCRM continuously evaluates the content and delivery of training courses by collecting feedback. This has been overwhelmingly positive, with more than 95 percent of participants agreeing that the training courses are interesting, well-structured and suited to their needs.

NCRM offers a bursary scheme to facilitate access to high quality advanced social science methods training across the UK. The scheme has made almost £350K available to some 400 researchers engaged in research, the teaching of research methods or the supervision of research.

Since 2005, the Centre has run three annual Summer Schools and six annual Autumn Schools for Early Career Researchers. These events have focused on issues such as the synthesis of complex data sets, the challenges of conducting collaborative research across disciplinary and methodological boundaries, developing the skills for collaborative working, making use of new data sources in the social sciences, hybrid and cross-over methods in social research, innovations in qualitative methods, interdisciplinarity and the evolution of methods, structural equation modelling and international and comparative research. More than 250 early career researchers have attended the schools and the training provided has been very well received.

Assessing methods training and needs

NCRM operates a two year rolling programme of training needs and impact assessments that began with a consultation exercise followed by a training needs assessment. These have continued biennially using online surveys and telephone interviews, as well as analyses of social science research job advertisements to identify the research skills looked for by employers. The findings informed the choice of courses on NCRM's training programmes and continue to play a vital part in guiding provision.

Findings from the surveys and from the telephone interviews suggest there are high levels of demand for both qualitative and quantitative research methods training, with the demand for quantitative methods

Research methods training by NCRM

700+ advanced research methods training courses across the United Kingdom

1,000+ days of training

10,000+ social science researchers from across the UK, from every career stage and social science and related disciplines.



Source: NCRM training course location data. Contains National Statistics data © Crown copyright and database right 2013; Contains NISRA data © Crown copyright and database right 2013; Contains NRS data © Crown copyright and database right 2013; Contains Ordnance Survey data © Crown copyright and database right 2013. Map base © Esri, DeLorme, NAVTEQ.

training mostly at introductory level, while the demand for training in qualitative methods is mostly at the intermediate or advanced level. The reason most commonly given for undertaking research methods training was to meet an immediate need arising from a current or planned research project.

The analyses of social science research job advertisements suggested that employers are increasingly seeking researchers with a range of both qualitative and quantitative skills, reflecting a growing need for more generalist researchers within the social sciences. There is a sustained demand for skills in statistics and in the use of statistical software, as well as skills in survey methods, qualitative interviewing and focus group methods. There is also increasing demand for skills in simulation and modelling and in visual and digital methods.

Other assessments have focused on the impact of NCRM's training and capacity building on researcher success in terms of increased funding applications and peer-reviewed publications. The findings indicate that NCRM's provision is well regarded by social scientists in the UK and attracts researchers from across the career spectrum.

The main reasons researchers attend are to find out about research and to learn the methods necessary to conduct a specific research task. The vast majority (over 90 per cent) feel they benefit from this provision, mostly in terms of increased knowledge about research methods and opportunities to reflect upon and clarify their understanding of research methods.

Many of the researchers who make use of NCRM's provision are research active, publishing in prestigious research journals, and there is clear evidence that NCRM has succeeded in engaging with a respected group working at the forefront of social science research and who value the contribution NCRM makes in terms of its training and capacity building.

With new funding and a new phase of NCRM beginning in October 2014, there remains a strong commitment to training and capacity building in advanced social science research methods. NCRM will build on its past success with a commitment to continue to offer the very highest standards of training to social science researchers across the UK.

Download and read NCRM reports and assessments <http://eprints.ncrm.ac.uk/>



Networking to innovate

NCRM has funded 21 Networks for Methodological Innovation (NMI) projects aimed at stimulating discussion and ideas and developing knowledge on methodological challenges and developments. Each project includes a series of network-based events, related activities and outputs. Here are two great examples:

Researching ethnicity

In 2010 Angela Dale, University of Manchester, and colleagues were awarded an NMI to explore the methodological challenges raised when analysing ethnic inequalities and ethnic identification in contemporary Britain. The project consisted of workshops, meetings and a conference, which explored:

- conceptual questions relating to definitions of ethnicity
- methodological approaches to understanding the role of context in research on race and ethnicity
- research methods for new immigrant groups
- the use of mixed methods to explore and understand aspects of ethnic identity and ethnic inequality

A final meeting of the project brought together senior people from central and local government, charities and academia to respond to and discuss the issues raised. Materials from the project were used to develop a website which provides data and information about ethnic difference and inequality in the UK.

Go to <http://www.ethnicity.ac.uk/> to find out more about the project research, events and publications.

Using social media in research

In 2013, Kandy Woodfield, at NatCen Social Research, and colleagues were awarded an NMI to explore the possibilities and challenges in using social media platforms in research. The project brought together an international network of interdisciplinary researchers and through a series of meetings, knowledge-exchange seminars, a conference and on-line activity, set out to look at:

- whether social science researchers should embrace social media and, if so, what the implications are for methods and practice
- how social media research changes perceptions of ethical practice
- if new social media blur the boundaries between qualitative and quantitative research

An online community of researchers interested in using social media platforms was developed from the research to take part in blogging on subjects such as Using 'Small Data' to Improve the Use of 'Big Data' and The contribution of social media to human resource management. A vibrant exchange of information, ideas and views takes place on Twitter including live chats on subjects such as teaching online interview methods.

Go to <http://nsmnss.blogspot.co.uk/> to find out more about the project. Take part in the debate on Twitter #NSMNSS



"I think the network has been critical for the use of participatory video in the social sciences ... the fact that so many researchers in the field are now aware of one another and sharing ideas and opportunities is a key outcome of the network."

Chris High, Open University

"The project has helped to disseminate to other social science researchers the potential of metaphor analysis as a methodological tool. For members of the project team, the major benefits came from testing and refining our methods through application to a wider range of research issues and data types. We have forged research collaborations with project members that continue to bring benefits for all involved."

Lynne Cameron, Open University

"We believe the series has been crucial in creating a space where different projects, disciplines, and professions could meet and share accounts of working practices, histories and planned future trajectories. The series provided some valuable thinking space, free of the challenges and exigencies of a specific empirical project."

Niamh Moore, University of Manchester

"I have been extremely fortunate to lead on two networks of methodological innovation funded by the NCRM which brought together academic researchers and survey practitioners from the government, not-for-profit and private sectors. The first network promoted the potential of using survey paradata to improve fieldwork management and data quality. The second network explored the opportunities and constraints of using the web to survey the UK general population. In funding these networks, the NCRM has made a vital contribution in bridging the gap between academic research and survey practice."

Gerry Nicolaas, Research Methods Centre at Ipsos MORI

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NCRM has been extraordinarily successful in promoting and producing both methodological innovation and excellence in research training. The Centre has made an invaluable contribution to enhancing the rigour of UK social science. In addition, the Centre's enormous output of work, particularly in terms of internationally renowned publications, has exerted an influence that far exceeds its size. It is no exaggeration to claim that NCRM has helped establish the UK as a world-leader in methodological research.

Professor Jackie Scott, Chair, NCRM Advisory Committee and
Professor of Empirical Sociology, University of Cambridge

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Looking to the Future: NCRM 2014-2019

Much has changed since NCRM was founded. Rapid and pervasive socio-technological change has created new ways of acquiring, storing, manipulating and transmitting huge volumes of data, often in real-time, as well as stimulating new modes of communication and collaboration between researchers. Novel forms of data have emerged, with biological markers routinely collected alongside social and economic outcomes and administrative and transactional data increasingly linked to one another, as well as to cross-sectional and longitudinal surveys.

The internet has given rise to new ways of collecting research data, in addition to creating social phenomena, such as blogging, social networking, tweeting and search engine usage. These changes in the data landscape have been accompanied by new perspectives on data accessibility, preservation and transparency, in the 'democratisation' and ethics of research conduct, and by radical shifts in the substantive and policy context of social science research.

The methodological research and training infrastructure provided by the ESRC has itself changed substantially, with major investments like the Researcher Development Initiative, TimeScapes, and the Survey Resources Network ending and new ones, notably the Doctoral Training Centres (DTC), the Q-Step Centres and the Administrative Data Research Network, introduced.

NCRM's new remit and structure will enable it to respond flexibly to emerging challenges and continue to serve as a beacon of high quality methodological research and training in the UK and internationally. The structure brings together three institutions with international reputations in methodological research and training in the social sciences. The University of Southampton has directed NCRM since 2004 and run highly regarded short-course programmes through CASS for more than 15 years.

The University of Manchester has longstanding experience in delivering high quality methodological research and training through its Cathie Marsh Centre, the Methods@Manchester initiative, as well as hosting two NCRM nodes and the Research Methods Programme before that. The University of Edinburgh recently received an additional five years of funding for the AQMeN Centre, which has achieved notable success in building quantitative methods capacity in Scotland through innovative training activities.

A central feature from 2014 will be the development of a new Research Methods Portal as part of a restructured and expanded website, extending NCRM's existing resources with a range of new online materials and functionality. This will provide seamless searching and browsing across all NCRM online resources, including the ReStore collection. These resources will be supported by a programme of advanced short courses, delivered in accessible locations throughout the UK, drawing on the partners' experience in methodological training.

The Centre will undertake a substantial programme of methodological research, both 'in-house' and through externally commissioned projects. The research will be focused in strategically important areas, enabling social scientists to address key substantive and policy-relevant research questions. NCRM's expanded programme of dissemination events will showcase key research findings and highlight leading-edge methodological developments.

I am delighted that the ESRC is supporting the crucial work of NCRM for a further five years and excited by the opportunities created through the new partnership. NCRM has become the key part in the ESRC's strategy for increasing the quality and range of research methods used by the UK social science research community. Our objective in future is to enhance and expand our research and training programmes to meet the evolving needs of social scientists across all sectors and disciplines.

*Professor Patrick Sturgis
Director, NCRM*

NCRM Nodes 2005-2014

NCRM has had a Hub and Nodes organisational structure, with the Hub being a coordinating unit based at the University of Southampton and the research and training focused Nodes distributed across the UK. Here is a short description of all the Nodes during 2005-14.

ADMIN (2008-11) exploited newly linked administrative and survey data to develop and disseminate methodology for making the best use of administrative data and reassessing how best to deal with some of the common problems associated with using survey based longitudinal data. ADMIN was based at the Institute of Education, University of London. Principal Investigator: Professor Lorraine Dearden.

BIAS (2005-08) focused on modelling the complexities and core processes that underlie observational social science data and on developing a set of statistical frameworks for combining data from different sources. BIAS was based at Imperial College. Principal Investigator: Professor Nicky Best.

BIAS II (2008-11) focused on addressing methodological challenges in the modelling of biases and complex structure in observational data, in particular surveys, longitudinal studies and small area data. BIAS II was based at the Imperial College London. Principal Investigator: Professor Nicky Best.

Lancaster-Warwick (2005-08) node's focus was to promote good statistical modelling in the social sciences through training and also to develop new statistical modelling methodology for longitudinal and other correlated data. Lancaster-Warwick node was based at the Universities of Lancaster and Warwick. Principal Investigator: Professor Brian Francis

Lancaster-Warwick-Stirling node (2008-11) developed statistical methodology and models related to correlated and longitudinal data with substantive applications in criminology, psychology, sociology and education. The Lancaster-Warwick-Stirling node was based at the universities of Lancaster, Warwick and Stirling. Principal Investigator: Professor Brian Francis.

LEMMA (2005-08) focused on the methodological developments in the specification and estimation of multilevel models for handling realistic complexity in data structures and social processes. LEMMA node was based at the University of Bristol. Principal Investigator: Professor Jon Rasbash

LEMMA II (2008-11) focused on the development of new multilevel modelling methodology to address important social science research questions and capacity building in quantitative social science. LEMMA II was based at the University of Bristol. Principal Investigator: Professor Fiona Steele.

LEMMA 3 (2011-14) focuses on building capacity in the analysis of longitudinal data. LEMMA 3 aims to review and synthesise important developments in longitudinal data analysis, develop and adapt new methodology that addresses problems in social research, apply the methods to substantive research projects, and implement the methodological research in the e-STAT software environment. LEMMA 3 is based at the University of Bristol. Principal Investigator: Professor Fiona Steele.

Methods for Research Synthesis (2005-08) developed methods for synthesising the results of all types of research and applied these methods to substantive review topics across the social sciences. MRS was based at the Institute of Education, University of London. Principal Investigator: Professor David Gough.

MODE (2011-14) develops multimodal methodologies for social scientists, providing systematic ways to investigate all modes of representation and communication in digital environments. MODE is based at the Institute of Education, University of London. Principal Investigator: Professor Carey Jewitt.

NOVELLA (2011-14) is concerned with the everyday habitual practices of families. NOVELLA conducts research projects on family practices that are highly socially relevant and of concern to policymakers and practitioners in the UK and internationally. NOVELLA is based at the Institute of Education, University of London. Principal Investigator: Professor Ann Phoenix.

PATHWAYS (2011-14) aims to identify pathways that link socio-demographic circumstances and biological disadvantage to adult health, and parental family and socio-economic circumstances to infant mortality, with a particular emphasis on the mediating factors that lie on these pathways. PATHWAYS is based at the London School of Hygiene and Tropical Medicine, University of London. Principal Investigator: Professor Emily Grundy.

PEPA (2011-14) aims to stimulate a step change in the conduct of programme evaluation, and maximise the value of programme evaluation by improving the design of evaluations and improving the way that such evaluations add to the knowledge base. PEPA is based at the Institute for Fiscal Studies and cemmap. Principal Investigator: Professor Lorraine Dearden.

Qualiti (2005-08) focused on the innovation, integration and impact of qualitative research methods, paying particular attention to the social contexts in which research methods and methodologies are situated. Qualiti was based at Cardiff University. Principal Investigator: Professor Amanda Coffey.

QUIC (2008-11) focused on the integration and analysis of multiple data sources using Computer Assisted Qualitative Data Analysis Software (CAQDAS) and the dissemination of such techniques through a training and capacity building programme. QUIC was based at the University of Surrey and Royal Holloway, University of London. Principal Investigator: Professor Nigel Fielding.

Real Life Methods (2005-08) explored new research methods that aim to grasp the multidimensionality of “real lives”. Real Life Methods was based at the Universities of Manchester and Leeds. Principal Investigator: Professor Jennifer Mason.

Realities (2008-11) specialised in researching and analysing ‘relationalities’ - personal relationships and connections between people via innovative qualitative and mixed methodologies. Realities node was based at the University of Manchester. Principal Investigator: Professor Jennifer Mason.

SIMIAN (2008-11) developed the methodology and the applicability of simulation and Agent Based Modeling in the social sciences. SIMIAN was based at the University of Surrey and University of Leicester. Principal Investigator: Professor Nigel Gilbert.

TALISMAN (2011-14) develops methods for geospatial data analysis and simulation, specifically models of spatial systems that emphasise interactions which reflect potential and flows at and between locations. TALISMAN develops models which are part of a long tradition in applied geography and urban and regional economics. TALISMAN is based at the University of Leeds and University College London. Principal Investigator: Professor Mark Birkin.

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